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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,586	11/04/1999	ROGER GUY MARKHAM	103245	2748

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EXAMINER

RAHIMI, IRAJ A

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 11/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/433,586

Applicant(s)

MARKHAM, ROGER GUY

Examiner

(Iraj) Alan Rahimi

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In papers filed on September 24, 2003, applicant added new claims 20 and 21.

Response to Arguments

2. Applicant's arguments filed on September 24, 2003 have been fully considered but they are not persuasive. Applicant argues that Ancin in view of Newman does not teach "an apparatus that counts pixels in regions of interest within data present on data bus..., the apparatus comprising a pixel counter coupled to the data bus, that selectively reads the image data from the data on the data bus...". Ancin clearly demonstrates in Fig. 2 a pixel counter that is coupled to the data bus. Since claim 1 does not indicate direct communication between the pixel counter and the data bus, teaching of Ancin would be applicable. Newman was used to show selectively reading the data from the data bus.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 2622

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-19 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. application No. 09/433,941. Although the conflicting claims are not identical, they are not patentably distinct from each other because they reflect the same invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ancin et al. (US patent 6038340) in view of Newman (US patent 5,287,452).

Regarding claim 1, Ancin et al. discloses an apparatus that counts pixels in regions of interest within data present on a data bus, the data on the data bus including image data having active and inactive pixels, the apparatus comprising a pixel counter, coupled to the data bus, that selectively reads the image data from the data on the data bus and that generates a pixel count based on the active pixels of the image data. Ancin in column 3, lines 22-31 discloses RAM 270 being connected to data bus 240. RAM contains the image processor 295, which in turn contains

Art Unit: 2622

pixel counter 320. Therefore, pixel counter 320 is connected to the data bus 240. Ancin continues to disclose counting of black (active pixels) and white pixels in column 4, lines 16-30. However, Ancin et al. does not clearly disclose reading the image data selectively. Newman teaches in column 7, lines 28-51 that image data can be selected based on the starting and ending address. He also discloses in column 2, lines 63-67 and column 3, lines 1-23 that image data is written into memory across a bus 12. Ancin and Newman are analogous art because they are from the same field of endeavor that is counting of black pixels on a bus and saving the count data for further processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Ancin et al. with Newman to control storage of image data in memory.

Regarding claim 2, Ancin et al. discloses the apparatus according to claim 1, wherein the pixel counter includes:

a counter coupled to the pixel count controller that counts the active pixels of the image data (pixel counter 320); and

a memory (RAM 270), coupled to the pixel counter controller and the counter, that stores the pixel count.

However, Ancin et al. does not disclose a pixel count controller coupled to the data bus that determines whether the data on the data bus is image data based on the image data identifying portion. Newman teaches in column 7, lines 28-51 that address translator 204 determines if the address on the bus corresponds to image data. Ancin et al. and Newman are analogous art because they are from the same field of endeavor that is counting of black pixels

Art Unit: 2622

on a bus and saving the count data for further processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Ancin et al. with Newman to control storage of image data in memory.

✓ Regarding claim 3, Newman discloses the apparatus according to claim 1, wherein the data on the data bus includes a data portion, a memory address portion, and an image data identifying portion (column 3, lines 11-23).

✓ Regarding claim 4, Newman discloses the apparatus according to claim 3, wherein the image data identifying portion is an image data flag that indicates whether the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10; virtual address signal is considered the flag).

✓ Regarding claim 5, Newman discloses the apparatus according to claim 3, wherein: the image data identifier portion includes an address; and when the image data identifier portion is the address of an image data memory connected to the bus, the pixel counter determines that the data on the data bus is image data (column 2, lines 62-67; column 3, lines 1-10).

Regarding claim 18, Newman discloses the method according to claim 12, wherein selectively reading the image data comprises selectively reading the image data from the data bus based on an address in the image data identifying portion of the data on the data bus (column 3, lines 3-23).

Art Unit: 2622

Regarding claim 19, Newman discloses the method according to claim 18, wherein the data on the data bus is image data if the address is the address of a memory (column 3, lines 3-10).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ancin et al. (US patent 6,038,340) in view of Newman (US patent 5,287,452) and further in view of Oh (US patent 5,729,351).

Regarding claim 11, Oh discloses the apparatus according to claim 1, wherein the pixel counter comprises:

an adder that receives image data and counts the active pixels present in the image data;
a frame counter that measures the amount of image data being added by the adder and instructs a memory to read the active pixel count from the adder and store the read pixel count when a frame of image data has been counted (column 5, lines 43-61). Ancin et al., Newman and Oh are analogous art because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Ancin et al. with Newman to control storage of image data in memory.

8. Claims 6-10, 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ancin et al. (US patent 6,038,340) in view of Newman (US patent 5,287,452) and further in view of Inora et al. (US patent (6,145,947).

Regarding claim 6, Ancin et al. and Newman do not disclose the apparatus according to claim 1, wherein the image data is grouped into a scan line, the scan line comprising at least one

Art Unit: 2622

row of pixels extending across an image. Inora et al. discloses in Figure 6 several scan lines of pixels of which any one could be used for counting. Ancin et al., Newman and Inora et al. are analogous art because they are from the same field of endeavor that is image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to combine Ancin et al. and Newman with Inora et al. to determine ink consumption.

Regarding claim 7, Inora et al. discloses the apparatus according to claim 6, wherein each scan line is divided into a plurality of frames, each of the frames comprising a predetermined number of consecutive pixels of the scan line. Inora et al. in column 5, lines 40-67 discloses dividing the image into blocks of 16x64. Therefore each scan line is divided to 16 pixels per frame.

Regarding claim 8, Inora discloses the apparatus according to claim 7, wherein the plurality of frames are further divided into a plurality of pixel blocks, each of the pixel blocks comprising a predetermined number consecutive pixels of a frame (Each pixel of the Inora's block can be considered to be the block).

Regarding claim 9, Ancin et al. discloses the apparatus according to claim 7, wherein: the pixel counter generates the pixel count based on the pixel count in each of the frame; and a memory separately stores the active count of each frame (column 4, lines 10-15).

Art Unit: 2622

Regarding claim 10, Inora et al. discloses the apparatus according to claim 6, wherein the pixel counter generates the pixel count based on the active pixels of each of the scan lines (Column 5, lines 19-28).

Regarding claims 12 and 13, arguments analogous to those presented for claim 1 and 2, are applicable.

Regarding claims 14-17, arguments analogous to those presented for claim 6-9, are applicable.

Allowable Subject Matter

9. Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art or the prior art of record does not teach or suggest that image data is read directly from the data bus and provided to the pixel counter.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2622


the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Iraq) Alan Rahimi whose telephone number is 703-306-3473. The examiner can normally be reached on Mon.-Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.


Alan Rahimi
October 20, 2003


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